SUBJECT INDEX

Advertising water works, 5, 430
San Francisco, 293
Air lift pumping, 212, 216
Akron water works improvements, 315
Algae, treatment to counteract growths in reservoirs, 149
trouble at Syracuse, 237
Alum, effect on colloids, 303
manufacture at Montreal, 841
Amendments to the Constitution, 784
American Water Works Association, annual convention, 783
constitutional amendments, 784
Council on Standardization, 788
development of Sections, 613
finance committee's report, 622
JOURNAL, 8, 423, 628
possible field for work by Sections, 5
proposed increase in dues, 787
publication committee's report, 628
secretary's New York office, 137
secretary's report, 775
society affairs, 137, 274, 416, 633, 783
treasurer's report, 779
Aquaphone detection of leakage, 489, 590
Aqueduct, Winnipeg, 705, 931
Army Water Supplies, construction troubles at cantonments, 2
Camp McClellan, Ala., 108
consumption of water, 102
Le Mans, A. E. F., 179
water supply for combat division, 117
Asphalt and felt membrane for lining concrete reservoir, 411
Auburn, N. Y., water pollution litigation, 41

Bacteria, B. coli tests, 153
daily fluctuations in numbers affected by weather, 354
effect at York of different steps in purification, 368
in public drinking fountains, 36
mailing case-method for long distance bacteriological control, 845
ozonization effects, 63
Bacteria—*continued*
presumptive and confirmatory tests, A. E. F., 188
ultra violet light effects, 325
variations in numbers at different stages of purification, Indianapolis, 770
Baffling sedimentation basins, 456
Baltimore, proposed extensions of works, 343
results of experimental baffles in sedimentation basins, 456
Bayonne, N. J., subaqueous crossing of Hackensack River, 401
Bloomington, Ill., typhoid epidemic, 282, 560
Boiler improvements, St. Louis, 799
Book-keeping for meter accounts, Terre Haute, 18
Buffalo, water waste control, 499

Caisson for Louisville pumping station foundations, 663
California Section, 633
Carbonating process of water softening, 446
Cast iron, electric, 484, 769, 793
Cement joints for cast iron pipe, 436, 951
Central States Section, 142
Chemical analysis, assists in determining source of leakage into cellars, 515
standards for chemicals used in, 157
Chemical and Bacteriological Section, 791
Chlorination, industrial supplies, 566
laboratory control, 383
long-time results, York, 369
research opportunities, 577
Clay, removal from water, 302, 606
Coagulants, effect on colloids, 303, 767
fields for research, 575
results of use, York, 381
Coal storage, bituminous, 796
Cold weather troubles, committee report, 749
Collecting bills, Terre Haute, 26
Colloids, properties affecting sedimentation, 302
relation to water purification, 428

Comments, 1, 149, 297, 423
Committee reports, cold weather troubles, 749
electrolysis, 618
finance, 622
official standards of water analysis, 753
publication, 628
sanitary drinking fountains, 33
Concrete, alkaline soil damages, 948
caisson for Louisville pumping station foundations, 663
closing cracks in reservoir linings, 410
recent developments, 672
water works uses, 203
Winnipeg aqueduct, 936, 945, 946
Constitutional amendments, 784
Consumption of water, *see* Water consumption
Contracts, standard form of, 657
cost-plus, for water works construction, 683
Convention, annual, 782
Council Bluffs, broken 24-in. main, 232
Council on standardization, 788
Couplings for fire hose, standardization progress, 865
Cracks in concrete reservoirs, closing, 410
Curves, probability, 811

Defiance, Ohio, new pumping and purification works, 440
Des Moines, standard for quality of water established by ordinance, 827
Delaware, Ohio, hydrants damaged by trucks, 73
Drinking fountains, report of committee of Iowa Section, 33
Dues, proposed increase, 787

Electric drive for centrifugal pumps, 536
Electric refining of cast iron, 484, 769, 793
Electric thawing of frozen pipes, Montreal, 910
Quebec, 881
Rochester, 78
Electrolysis, committee report, 618
fund, 138, 418, 780
some aspects of, 882
Emergency gang organization, Philadelphia, 77
Everett, Wash., Sultan water supply, 451

Field investigations of water supplies, 278, 759
Filters, concrete for, 209
Defiance, Ohio, 448
Indianapolis operating results, 770
instruction in operating, Texas, 285
laboratory control, 382, 569
Le Mans, France, 183
Montreal, 898, 908
research fields, 576
waste water pollutes Niagara River, 52
York operating results, 268
Finance committee report, 623
Finance, Akron water works improvements, 322
conditions due to war continue, 471
high cost of money, 516
legislation to help municipal water departments, 152
prewar and present reproduction costs, 523
public uses of water, Rochester, 869
Fire protection, consumption for, 875, 917
water works for, 223
Flexible joints, 390, 395, 402, 453
Flushing water mains, 158
Foundations for new pumping station, Louisville, 663
tests of soil bearing capacity, Winnipeg aqueduct, 730
Fountains, sanitary drinking, 33
Four-States Section, 416
Frozen pipes and meters, committee report, 749
Montreal, 910
Quebec, 880
Rochester, 78
St. Louis, 86
Fuel oil tanks, 210
Furnaces for boilers, improved, 799

Grounding secondaries of electric transformers to water pipes, 761, 789

Hackensack Water Co., water waste control, 488
Hagerstown, Md., effect of weather on quality of supply, 352
Hartford, experience with compound meters, 855
uses of water, 914
Hose, friction in, 225
progress in standardizing couplings for fire, 865
Housing projects, water supplies for industrial, 239

Hydrants, damage by motor vehicles, 65
thawing frozen, 80, 751

Ice in standpipes, 579
Illinois Section, 275, 416, 786
Illinois, stream pollution, 549
water supplies, public, 542
Index numbers and scoring water supplies, 413, 927
Indianapolis, monthly variations in bacteria in effluents from different stages of purification process, 770
Iowa Section, 5, 139, 152
Iowa, unsatisfactory supplies, 759
water works legislation, 152

Javellization, 193
Joints, *see* Pipe joints,

Laboratory control of water purification plants, 382, 569
Labor wages, 471
Labor shortage, 611, 773
Leadite, 236
Lead wool for closing cracks in concrete reservoir linings, 410
Leaks, *see* Water waste
detection of, 589
Legal decisions, Auburn pollution case, 41
law of riparian ownership, 554
Mankato, Minn., pollution case, 44
Niagara River pollution case, 52
reasonable use of water, 56
Legislative committee, Iowa Section, 152
Local assessments for water main extensions, 153
Louisville, difficulties in building pumping station foundations, 663
Lyster bags, 181

Mailing cases for water samples, 845
Mains, *see* Pipe
broken, annual record, Rochester, 651
detection of leaks, 589
experience with broken 24-in., 232
flushing, 158
frontage tax for, 141
frozen, 78, 86, 749, 880, 910
subaqueous, Bayonne, N. J., 401
Everett, Wash., 453
Narrows, New York, 394
North Brother Island, New York, 388
Mankato, Minn, water pollution case, 47
Membership, additions, 143, 276, 419, 635
Membrane method of lining concrete reservoirs, 411
Metalium, 234
Meters, Experience with compound, 852, 855, 862, 859
frozen, 78
measuring water supplied to five distribution systems of Newark, 163
meter practice at Terre Haute, 13
Paterson experience, 492
recommended for all public uses, Iowa, 152
relocation of poorly set, 1
San Francisco experience, 288
standard specifications for, 6, 137
Tuscaloosa experience, 132
Milwaukee, experience with compound meters, 852
Minneapolis, hydrants damaged by trucks, 67
performance of centrifugal pumps, 88
water waste notice, 433
Minnesota Section, 274, 633
Minnesota, typhoid fever records, 280
unsatisfactory water supplies, 759
Montgomery, Ala., temporary contamination of deep wells, 171
Montreal, alum manufacture, 841
municipal water works, 892
works of the Montreal Water & Power Co., 903
Muscatine, Iowa, rainfall, 126

Newark, N. J., Haynes memorial tower, 169
measuring water supplied to the five distributing systems, 163
relocation of poorly set meters, 1
New Orleans, experience with compound meters, 862
New Rochelle, N. Y., hydrants damaged by trucks, 73
water waste control, 513
New York City, hydrants damaged by trucks, 65
laboratory control of supplies, 161
pumping Croton water by hydraulic power, 461
subaqueous mains, Narrows siphon, 394
North Brother Island, 388
treatment to counteract algae, 149
water consumption during two severe winters, 425
New York Section, 143, 274, 633
Niagara Falls, N. Y., injunction against pollution of river by wash water from water filters, 52
Nozzles for drinking fountains, 36

Oil tanks, fuel, 210
Omaha, standard of purity for water established by ordinance, 827
Oswego, N. Y., water waste control, 512
Ozone for treating water, 7, 60

Paterson, N. J., hydrants damaged by trucks, 71
water waste control, 492
Pensions for water works employes, 153
Philadelphia, experience with compound meters, 859
hydrants damaged by trucks, 74
life of cast iron pipe, 155
organization of emergency gang, 76
Pipes, *see* Mains
concrete pressure, 203, 742, 947
detection of leaks, 589
electric cast iron, 477, 769, 793
frozen, committee report, 749
Montreal, 910
Quebec, 880
Rochester, 78
St. Louis, 86
joints, cement, 436, 951
factory-made, 477, 769, 793
flexible, 390, 395, 402, 453
metalium and leadite, 234
life, 155
reduction of classes by increased strength of metal, 364, 765
Pollution of water; Auburn decision, 41
deep wells, Montgomery, 171
Illinois streams, 549
legal responsibility for, 44
Niagara River, 52
public drinking fountains, 33
sewage for industrial water supply, 562
Tonawanda, N. Y., 176
Population, Akron's growth, 316
ratio of industrial to total, 315
Winnipeg, 712
Portland, Ore., cement joints for cast iron water mains, 951
lining concrete reservoirs, 412
Presidential address, 652
Prices, war burdens continue, 471
Probability curves, 811
Publication committee, annual report, 628
statement concerning Journal, 423
Public drinking fountains, 33
Public Health Service's methods of improving rural sanitation, 406
Publicity for water works, 5, 293, 431
Public service commissions, 528
Public uses of water, 152, 914
Pumping Croton water by hydraulic power, 461
Pumping station operation, some economical features of, 795
Pumps, air lift, 212, 216
centrifugal, Montreal, 895
performance records, Minneapolis, 88
variable speed induction motor drive, 536
reciprocating, St. Louis, higher duty with superheated steam, 805
Purification of water, *see* Water purification

Quebec, water supply of city of, 880

Rainfall, measurements of, 764
Muscatine, 127
Rates, *see* Water rates
Research in problems of water purification, cooperative, 572, 950
Reservoirs, capacity for fire protection, 226
counteracting algae, 149
linings, concrete, 203
repairing, 410
membrane lining, 411
River pollution, *see* Pollution of water
Rochester, N. Y., frozen mains, services and hydrants, 78
revenue chargeable to public uses of water, 869
water works management, 641

San Francisco, cement joints for cast iron pipes, 436
restricting water waste, 288, 793
Secretary, removal of office, 137
annual report, 775
Sections, California, 633
Central States, 142
Chemical and Bacteriological, 791
4-States, 416
Illinois, 275, 416
Iowa, 5, 139, 152, 786
Minnesota, 274, 633
New York, 143, 274, 419
Sedimentation, 277
experimental baffles in Baltimore basins, 456
fields for research, 575
long-time records, York, 371
removal of clay and silica, 302
Service charges, San Francisco, 293

Services, frozen, committee report, 749
frozen, Rochester, 78
Montreal, 910
St. Louis, 86
grounding secondaries of electric light transformers, 761, 789
Sewage purification to protect water supplies, 553
Sewer flushing, water for, Rochester, 873
Silica, removal from water, 302, 606
Society affairs, 137, 274, 416, 633, 783
Softening water, Defiance, 443
Soil, bearing capacity of, Winnipeg aqueduct, 731
Specifications, standard for water meters, 6
Standardization, chemicals used in analytical work, 157
Council on, 788
quality of water, 821
report of committee on official standards of water, 753
Standpipes, concrete, 207
experiences with ice, 579
Statistics, probability of errors, 811
Steam outfit for thawing frozen pipes, 80, 87.
St. Louis, exceptional consumption, 85
frozen services, 86
hydrants damaged by trucks, 71
pumping station improvements, 795
Stokers, mechanical, 796
Street sprinkling uses of water, 873, 917
Superheated steam economies, St. Louis, 805
Surge tower, Winnipeg, 718
Syracuse, algae troubles, 237
hydrants damaged by trucks, 70

Terre Haute, advertising water works, 431
bravery of water works employes, 286
meter practices, 12
Texas, supervision of water purification, 284
Tonawanda, N. Y., typhoid fever epidemic, 176
Toronto, experiments with different grades of filter alum, 843
Transformers grounded to pipes, 761, 789
Treasurer's report, 779
Trucks damage hydrants, 65
Tuscaloosa, Ala., effects of meters, 132
Typhoid fever, Bloomington, Ill., 282, 560
Minnesota records, 280
New York, 162
Tonawanda, 176

Ultra violet light effects on bacteria, 325

Valuation, public service commission procedure, 528
Valves, emergency operation, 76

Washington, more water for Greater, 377
Water analysis, report of committee on official standards, 753
Water consumption, camps and cantonments, 102
effect of metering on, 12, 132, 492
excessive, St. Louis, 85
Hartford, 914
Montreal, 900
New York, annual per capita per day, 498
during two cold winters, 425
Paterson, N. J., 492
public uses, Rochester, 871
Water mains, *see* Mains
Water pollution, *see* Pollution of water
Water purification, cooperative research in, 572
Defiance, Ohio, 440
filtration, *see* Filters
laboratory control, 161, 382
monthly variations at Indianapolis, 770
ozonization, 7, 60
removal of clay and silica, 302, 606
small, very hard supply, 569
treatment to counteract algae, 149
ultra violet light methods, 325
Water rates, Montreal, 901, 912
public service commission regulation, 528
San Francisco, 291
Terre Haute, 15
Water softening, Defiance, 443
Water supplies, effect of weather on quality, 352
fire protection requirements, 223
heated where main crosses sewer receiving exhaust steam, 644
Illinois public, 542
industrial housing projects, 239
investigations should be complete, 278
laboratory control, 161, 382
purification of small, hard, 569

Water supplies—*continued*
results of flood on, Montgomery, 171
rural, 198, 283, 406
scoring by index numbers, 413, 927
sewage supplies for industrial water supply, 561
standards of quality, 821
Washington and suburbs, 377
Witt ground water, 596
Water waste, control, 488
detection, 589
San Francisco investigations, 288, 793
Water works, cantonment, *see* Army water supplies
Akron, 317
Baltimore, 343
census data about American municipal, 264
high cost of money for, 516
operating experiences, 641
prewar and present reproduction costs, 523
war burdens continue, 471
Winnipeg, 693
Wells, air lift pumping, 212, 216
Illinois, 543
pollution, Mankato, Minn., 44
Montgomery, Ala., 171
Witt, Ill., 596
Winnipeg, new water works, 693, 931
Witt, Ill., ground water supply, 596

AUTHOR INDEX

ABBOTT, C. E., flat rate vs. meters, 132
ACKERMAN, J. WALTER, water pollution at Auburn, N. Y., decided to be a violation of the state penal code, 41
ALLEMAN, GELLERT, some aspects of electrolysis, 882
ANDREWS, GEORGE C., water waste control, 499
ARMSTRONG, JAMES W., results of experimental baffles at Montebello filters, 456

BABBITT, H. E., detection of leaks in underground pipes, 589
BENHAM, W. L., electric cast iron pipe and factory-made lead joints, 769
BERNHAGEN, LEWIS O., supervision of water purification plants in Texas, 284
BIRDSALL, LEWIS I., necessity of competent supervision and careful laboratory control in the operation of purification plants, 382
BIRGE, E. G., rural water supply an integral part of the municipal supply, 198
BLOOMQUIST, H. F., water works for fire protection, 223
BOHMANN, H. P., Milwaukee experience with compound meters, 852
BOYDEN, H. C., recent developments in concrete, 672
BRENSKY, A. A., (with G. C. Habermeyer), public water supplies in Illinois, 542
BRUSH, W. W., classes of pipe as affected by strength of metal, 364, 367
  damage to fire hydrants by motor vehicles, 65
  standard specifications for water meters, 6
  treatment to counteract algae growths in large reservoirs, 149
  water consumption in New York during two severe winters, 425
  water waste control in New York, 495
BUCHHOLZ, G. W., suggesions for a standard form of contract, 657
BURNS, CLINTON S., Sultan water supply of Everett, Wash., 451

CAIRD, JAMES M., operation of an American or rapid water filtration plant for 20 years at York, Pa., 368
  treasurer's report, 779
CAPPELEN, F. W., damage to hydrants by trucks, 67
  remarkable pumping performance at the Northeast pumping station, Minneapolis, 88
CARSON, HARRY Y., electric cast iron pipe and factory-made lead joints, 477, 793
CASGRAIN, CHARLES P., water supply of the city of Quebec, 880
CHASE, W. G., construction features of the water works of the Greater Winnipeg Water District, 931
CHESTER, JOHN H., hydrants damaged by trucks, 74
CLARKE, D. D., asphalt and felt membrane for concrete reservoir linings, 411
CONARD, R. W., classes of pipe as affected by strength of metal, 365
CRAMER, W. S., hydrants damaged by trucks, 73
CUDDEBACK, A. W., hydrants damaged by trucks, 71
  water waste control, 492

DAVIS, CARLETON E., development of Sections, 613
  life of cast iron pipe in Philadelphia, 155
  presidential address, 652
DAY, LEONARD A., some economic features of pumping station operation, 795
DEANE, WILLARD A., effect of reagents on flocculation, 767
DEEM, CHARLES J., air lift pumps, 216
DIVEN, JOHN M., secretary's report, 775.
  vote of commendation for services, 790

DIXON, G. GALE, water works improvements at Akron, 315
DUNHAM, H. F., classes of pipe, 366, 765
importing labor, 773
DUNLAP, J. H., sanitary drinking fountains, 33

EARL, GEORGE G., New Orleans experience with compound meters, 862
ELLIOTT, G. A., experiences of the Spring Valley Water Co., in restricting the waste of water in San Francisco, 288
ELLMS, JOSEPH W., ozone as a disinfectant in water purification, 60
relation of colloids to water purification and sewage disposal, 428
removal of clay and silica from water, 606
ENGER, MELVIN L., (with W. J. Putnam), economy resulting from the use of variable speed induction motors for driving centrifugal pumps, 536
ERICSON, JOHN, meeting the shortage of unskilled labor, 611
ETNYRE, S. L., experience with a broken 24-in. water main, 232

FAIR, GORDON M., elements of the theory inderlying the disinfection of water by ultra violet light, 325
FLANAGAN, J. C., responsibility for pollution of water, 49
FRENCH, D. W., water waste control, 488
FRITZE, LUCIUS A., water supply problem in a combat division, 117
FUERTES, JAMES H., additional water for Balimore, 343
basic principles used in the designs for the new water supply of Winnipeg, 693
FULLER, GEORGE W., cost-plus contracts for water works construction, 683

GARRATT, J. E., Hartford experience with compound meters, 855
GOODELL, JOHN M., a brave deed, 286
importance of Sections, 614
magnitude of American municipal water supply business, 264
memorial possibilities in water works plants, 427
Minnesota's typhoid fever record, 280
questions before the house, 8
GOODELL, JOHN M., reaching the public, 430
rural water supplies, 283
scientific control of water supplies, 159
GWINN, DOW R., high cost of money to public utilities, 516
meter practices of the Terre Haute Water Co., 12
prewar and present production costs, 526
GRISWOLD, F. M., recent progress in standardization of fire hose couplings and fittings, 865

HABERMEYER, G. C., (with A. A. Brensky), public water supplies in Illinois, 542
HALE, F. E., chemical methods of determining source of ground water, 514
HANSEN, PAUL, will cities ever learn from the experience of other cities how to protect their public water supplies? 282
HART, WM. L., probability curves, 811
HAVILL, H. T., water waste control, 509
HAYDOCK, CHARLES, grout and lead wool for cracks in concrete reservoirs, 410
HAZELTINE, L. A., grounding secondaries of electric lighting transformers to water pipes, 761
HAZEN, ALLEN, sedimentation of very fine suspended matter, 277
HAZLEHURST, G. H., temporary contamination of a deep well supply at Montgomery, 17
HEALY, THOMAS, substitutes for lead in joints, 234
HILL, NICHOLAS S., Jr., additional water for Baltimore, 343
new water pumping and purification works at Defiance, 440
HINMAN, JACK J., JR., possible field for work by the Sections, 5
in union is strength, 152
sanitary drinking fountains, 33
standards of quality of water, 821
water supply of the Service of Supplies, A. E. F., 179
HOGAN, JOHN P., Narrows siphon, from Brooklyn to Staten Island 394
HOLADAY, KENNETH, benefits of the application of chemistry to the operation of a small filter plant, 569

HOMMON, HARRY B., protection of water supplies by sewage purification, 553
HORTON, ROBERT E., rainfall records, 764
HORTON, THEODORE, typhoid fever outbreak at Tonawanda, N.Y., 176
HOWSON, L. R., prewar and present reproduction costs of water works, 523
HUBBARD, WINFRED D., pumping Croton water by hydraulic power, water supply of New York, 461

IRWIN, A. C., concrete in water works construction, 203

JENNINGS, C. A., chlorination of industrial supplies, 567
JOHNSON, GEORGE A., progress in B. coli tests, 153
status of ozone in the treatment of water, 7
supervising engineers' troubles in cantonment construction, 2
JONES, W. N., repairing cracks in concrete reservoir linings, 411
JORDAN, HARRY E., monthly variations in bacteria in effluents from different stages of purification process at Indianapolis, 770

KEMBLE, F. G., hydrants damaged by trucks, 73
water waste control, 513
KINGSBURY, F. E., new maximum in water consumption and frozen service lines, 84

LEDOUX, J. W., observations concerning the public service commission, 529
LESAGE, THOMAS W., municipal water supply, Montreal, 892
LEVINE, MAX, notes on experiences with the presumptive and confirmatory tests for B. coli in water analysis, A. E. F., 188
LITTLE, BEEKMAN C., experiences with frozen services, mains and meters during the winter of 1917–1918, Rochester, 78
water works experiences, 641
LUMSDEN, L. L., improvement of rural water supplies, 406

MCCAFFREY, WM. A., water waste control, 512
MCCRADY, M. H., mailing cases for water samples, 845
MAFFITT, D. L., sanitary drinking fountains, 33
MASON, W. P., standardization of chemicals used in analytical work, 157
MEADOWS, JAMES O., experience of the Montreal Water & Power Co. in the manufacture of filter alum, 841
METCALF, LEONARD, experiences with ice in standpipes, 579
war burdens of water works in the United States still continue, 471
MOLIS, WM. P., flushing water mains, 158
MORSE, ROBERT M., increased water supply for Greater Washington, 377

NELSON, FRED B., water waste control in New York, 503

OLIPHANT, JOHN, air lift pumping and water purification, 212

PEARSE, LANGDON, chlorination of industrial water supplies, 566
stream pollution in Illinois, 549
PITCHER, F. H., works of the Montreal Water & Power Co., 903
PRACY, GEORGE W., cement joints for cast iron water pipe, 436
PUTNAM, W. J., (with M. L. Enger), economy resulting from the use of variable speed induction motors for driving centrifugal pumps, 536

QUILTY, PATRICK, laying and repairing a 12-in. subaqueous main to North Brother Island, N. Y., 388

RACE, JOSEPH, cooperative research, 950
water waste control, 952
RAMSEY, W. H. G., water distribution systems of industrial housing projects for shipbuilders, 239

SALMONDE, H. F., removal of clay and silica from water, 607
SANZENBACHER, GEORGE, method of metering the water supplied to the five distribution systems of the city of Newark, 163
SAVILLE, CALEB MILLS, legitimate use of water, 914
SCHARFF, MAURICE R., water supply system of Camp McClellan, Ala., 108
SHERRERD, FRANCIS H., Bayonne water pipe crossing under the Hackensack river, 401

SHERRERD, MORRIS R., Newark's experience in relocating poorly set meters, 1
SJOBLOM, M. C., outbreak of typhoid and dysentery at the Chicago & Alton shops at Bloomington, 560
SMITH, OTTO M., removal of clay and silica from water, 302, 609
SPERRY, WALTER A., removal of clay and silica from water, 606
STORY, STEPHEN B., revenue chargeable to public uses of water, Rochester, 869

VAN LOAN, SETH M., hydrants damaged by trucks, 74
organization of Philadelphia emergency gang, 76
Philadelphia experience with compound meters, 859

WALL, E. E., hydrants damaged by trucks, 71
WARREN, W. D. P., rational method of developing a shallow ground water supply, 596
WESTON, ROBERT SPURR, removal of clay and silica from water, 607
WHITNEY, RICHARD, hydrants damaged by trucks, 70
WHITTAKER, H. A., importance of complete investigation work in determining the safety of water supplies for human consumption, 278
index numbers and scoring of water supplies, 413
WILES, C. W., hydrants damaged by trucks, 73
WILSON, JAMES B., difficulties in building the Louisville pumping station, 663
WILSON, JOHN, legal responsibility for a pure water supply, 44
WOLMAN, ABEL, cooperative research in problems of water purification, 572
inquiry into the effect of meteorological conditions upon the efficiency of storage, filtration and chlorination, based upon a study of the Hagerstown water supply, 352
index numbers and scoring of water supplies, 927